



# LM16VL-SF

[User Manual]

Please refer to your Parts Inventory Sheet when installing your marker.

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IMPORTANT:

**YOUR SMUCKER FOAM MARKER COMES WITH A 2 YEAR MANUFACTURES WARRANTY. PLEASE SAVE YOUR RECEIPT FOR PROOF OF PURCHASE. CONTACT THE DEALER THAT YOU PURCHASED YOUR FOAM MARKER FROM WITH ANY WARRANTY ISSUES.**

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You can visit our [smuckermfg.net](http://smuckermfg.net) website page for reference to all foam marker parts and diagrams. If you still have questions, give us a call and we can even help you locate your closest Smucker dealer.

Also, visit [www.smuckermfg.net](http://www.smuckermfg.net) or ask your dealer about the other product lines we offer. We offer premium products at an affordable price. Take a look at our Weed Wipers, Calf Warmers, and VisionWorks camera systems for farm equipment on our website.

[www.smuckermfg.net](http://www.smuckermfg.net)

[www.redweeder.com](http://www.redweeder.com)

[www.visionworkscameras.com](http://www.visionworkscameras.com)

Mobile website for VisionWorks Cameras



Smucker Mobile website



## Installation Instructions

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Thank you for purchasing a LandMark™ Foam Marker, it has been built to produce high-quality foam marks with minimal service. In addition to producing great foam, the LandMark™ is also capable of keeping pace with high-speed sprayers. For best results, please read and follow the installation and operating instructions below. Please refer to your Parts Inventory Sheet when installing your marker.

### Step #1 Mounting your Tank

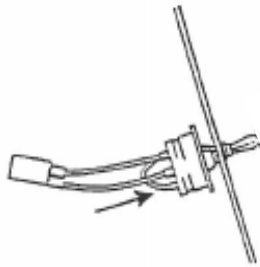
The first step is to mount your tank/pump assembly (LMSFVL) in a secure position. **You need to supply** 4 qty: 5/16” bolts to fit into the four inserts at the bottom of the tank assembly. You may also choose to mount your tank with ratchet tie down strap to secure to your tank assembly as pictured.



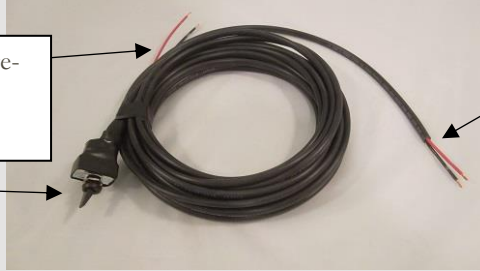
Note that the tank pictured is a 25 gallon tank. This image is only for your reference.

## Step #2 Wiring to Power And Installing Switchbox

Next, you will need to permanently mount the power switch by drilling a 15/32" hole on your preferred mounting station and feed the switch toggle through as pictured. Simply unscrew your nut on your switch, as pictured, and secure it down once mounted on your dash. Make sure that you do not allow the wire to come into contact with any sharp, hot, or moving surfaces.



This side will be pre-wired into your marker box.



Route this power lead into your 12V power source.

**Route the power lead to a 12v power source by connecting the red wire to positive and connect the black wire to negative.**

**Connecting the wires backwards will destroy your solenoids and void your warranty.** To power your switchbox, simply run your 24 ft. cable from the tank assembly to your push to connect cord on your switch box.

Note: If two 6v batteries are used, connect the red wire to the positive post connected to the starter, and the black wire to a ground. We have included a wiring schematic in your catalog and our website (FAQ) for your reference.

### Step #3 Mounting the Foam Chambers

We have included a metal bracket (FM1007) to mount the foam chamber/nozzle assembly (FM100B-99). Weld or U-bolt (**not provided**) your brackets horizontally so that your foam chamber sits in the metal cradle near the end of each boom (as pictured below). Each foam chamber mounts on the bracket with two #24 clamps (CL0024). Mount the chamber/nozzle assemblies so that the nozzles are pointed down. If possible, the nozzles should be outside the spray pattern. The 24" drop nozzle can be cut to a length of your choice.



Metal Brackets

Notice that the nozzles are pointed down and allow space outside the spray pattern.



#24 Clamps



24" drop nozzle

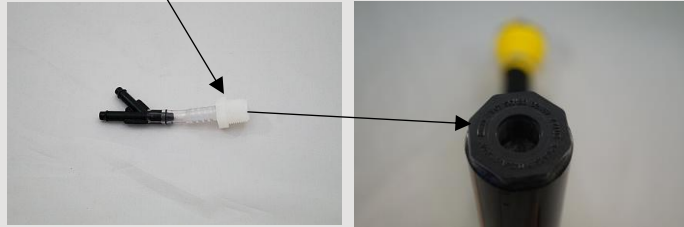
If you want to make, "ribbon" foam that lays on top of standing crops...the boot can be removed and you can order the optional, "ribbon kit" part number (HE1114).



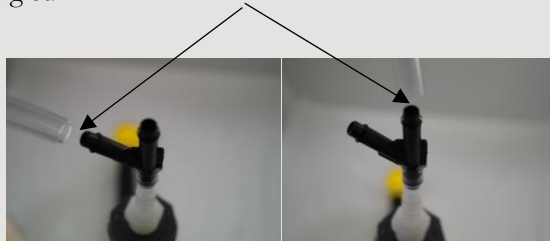
Ribbon kit

## Step #4 Plumbing the Liquid and Air Lines

First, screw your Y-connectors (HY14AS QTY: 1) into the inserts on the foam chamber.



Then connect your 1/4" tubing lines (VL0140) to each "Y" connector (both ends as pictured), and run the lines along the boom frames toward the tank/compressor assembly. Cut your tubing accordingly for each line. Make sure there is excess tubing where the spray boom folds up to prevent the lines from getting tangled.



One of your tubing lines should be connected to the white barb (on brass needle valve), and the remaining tubing line should be connected to the white barb on the outside of the box. Below you will see a picture of what you should be seeing on your control box.



Finally, secure the tubing lines along the boom and sprayer frame with the nylon ties provided (NY108H). Be careful to not kink or pinch the lines with the ties provided. You should be ready to go! Make sure that your push to connect power chord is connected, and then follow our operating instructions to start making foam.

# Operating Instructions

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## Mixing Your Foam Solution

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To ensure the highest-quality foam marks, we recommend using our Field Mark® Foam Concentrate (FOC001). You can try other foam concentrates if you please, but it's very important that you do not use, "hard" water. You will get, "soupy" foam if you have hard water, so a water softener is recommended if you have hard water.

### **Mixing Instructions:**

First, fill your tank with clean water and then add foam concentrate. When using 80:1 Field Mark® Foam Concentrate, use the following rates with your lid as your measurement and pour 1-1/5 cups (or 1-1/5 lids). Remember to plug the hole in the lid to prevent leaks.

If you are using a brand other than our Field Mark® Foam Concentrate, follow the manufacturer's instructions.

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## Starting Up Your Foam Marker

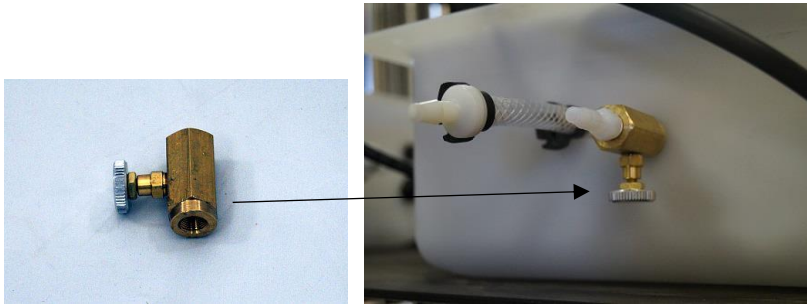
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Once your machine has been powered up, flip the toggle switch to turn the unit on and off. Foam solution and air will travel to your chamber and start generating foam.

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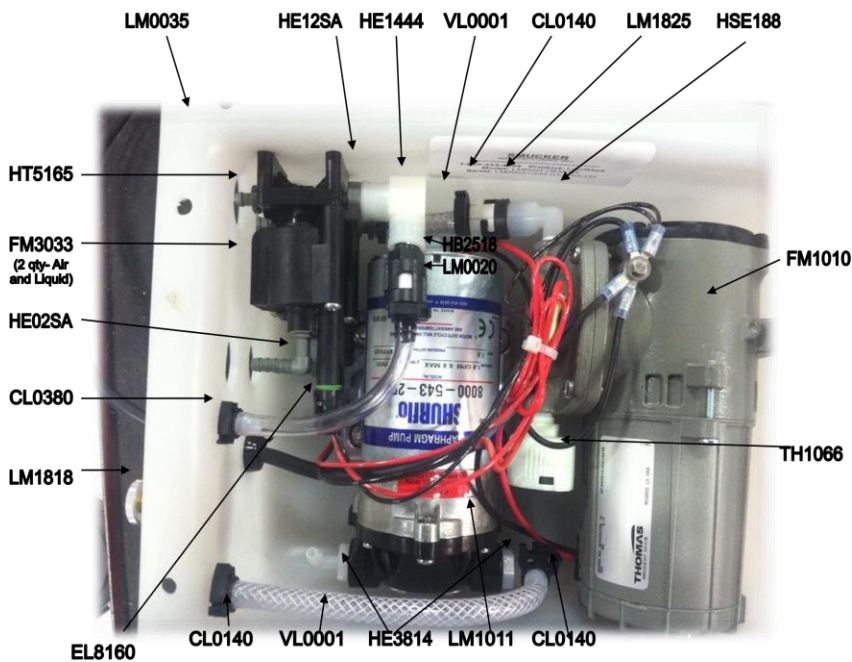
## Adjusting Your Foam Marker Output

While in the field, you may choose to adjust your marker to produce foam at a faster rate to produce more foam drops. To adjust your foam output, stiffness, and volume simply adjust the brass needle valve pictured:



Note: If the needle valve is opened too far, the foam chambers will flood and produce wet, sloppy foam. You should be able to produce a drop every second if you adjust the nozzle to optimum speed. In most spraying applications this is more than enough marks per foot. You can conserve your foam by turning down the liquid flow when a desired foam consistency is achieved.

**Diagram of the LandMark Foam Marker components for systems build after January 2013**



PART #	DESCRIPTION
CL0140	CLAMP, FOR 1/4" REINFORCED
CL0380	CLAMP, NYLON HOSE, 3/8
EL8160	WP DISCONNECT WIRE LEAD
FM1010	PUMP, FM 12V, W/FILTER
FM3033	3-WAY SOLENOID VALVE
HB2518	BUSHING 1/4" X 1/8"
HE02SA	1/4 TUBE X 1/4 HB ADAPTER ELBOW
HE1444	1/4" FPT X 1/4" FPT EL
HE3814	HE, 3/8 X 1/4
HSE188	1/8" STREET EL
HT5165	1/4 TUBE X 1/4 HB ADAPTER
LM0035	PLASTIC ENCLOSURE FOR FM, WHITE
LM1011	PUMP, LM SHUR FLO ASSY
LM1818	VALVE, NEEDLE, BRS 1/8X1/8



# Maintenance Requirements

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## Common Filter Maintenance

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There are two filters on the air pump (one felt that needs replaced when it turns black...and one sponge that can be blown out over time). There is a filter at the bottom of the tank that should be checked regularly to make sure the flow of liquid isn't being blocked...this can easily be cleaned by reaching into the tank..

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## Operating at Freezing Temperature

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When operating in temperatures at, or below freezing, one to two cups of ethylene-glycol-based antifreeze may be added to five gallons of foam solution.

If your system will be exposed to freezing temperatures overnight...reach into your tank and pull out the foam solution. Then proceed to run the system for 10-15 seconds to clear the foam solution from the pump and solenoids.

For long term storage...drain the tank of foam solution and run fresh water through the entire system. While the unit is still running, blow air through the suction tube until the system is dry. Flip the power switch to dry the other side.

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